

## Notice of Intent to Release a Solicitation for NASA Mars Scout Investigations

### Extended Version

The National Aeronautics and Space Administration (NASA) Office of Space Science (OSS) intends to release a Mars Scout Announcement of Opportunity (AO) approximately April 2002 to solicit proposals for Mars Scout space flight science investigations; proposals in response to this AO will be due 90 days after its formal release. Mars Scout investigations may include remote observations from Mars-orbiting spacecraft; missions that deploy aerial or landed systems to study the Martian atmosphere, surface, interior, geopotential fields, and/or deep subsurface; and sample return missions. Mars Scouts are intended to augment and/or complement and not duplicate the major, strategic Mars missions being planned as part of NASA's Mars Exploration Program (MEP) or by other non-U.S. organizations. Participation in this intended AO will be open to all categories of organizations, foreign and domestic, including educational institutions, industry, nonprofit organizations, NASA Centers (see paragraph below), the Jet Propulsion Laboratory (JPL), and other Government agencies.

Teaming arrangements among universities, industry, nonprofit institutions, and/or Government agencies (both foreign and domestic) are encouraged. Teams are encouraged to utilize industry participation to the fullest extent reasonable. NASA field centers and the Jet Propulsion Laboratory are welcome as Mars Scout mission team members with the proviso that they should do so only because of the unique skills, facilities, and/or capabilities the organization brings to the team. **Note especially that if project management and end-to-end mission system design and implementation is to be obtained from a NASA Center, this function MUST be performed by a NASA Center designated to fulfill such function consistent with their mission (JPL for Planetary Exploration, and GSFC for Earth Science/Physics and Astronomy) within the agency. Responsibility at the component or subsystems, (e.g. instrumentation) level can be performed at other NASA Centers with the appropriate skills and expertise, and consistent with their mission within NASA.**

This intended Mars Scout AO will be similar to those for NASA's Discovery and Explorer programs by soliciting two types of flight investigations: 1) Mars Scout Mission investigations for which the Principal Investigator (PI) is responsible for a complete space flight investigation including the experiment hardware, the spacecraft, launch services, all mission operations, and data analysis. For this intended AO, Scout mission investigations are to be launched no later than Dec. 31, 2007, and may be proposed with a total cost to OSS of no more than \$325M (FY 2003). NASA intends to select up to four proposals for further study in a Phase A Concept Study, with at least one mission selected for flight development from among the Phase A Concept Studies. 2) Mars Scout Mission of Opportunity investigations for which the "parent" mission is sponsored by an organization other than NASA OSS while the U.S. NASA PI is responsible to NASA OSS for an investigation to be conducted on or through that mission, including provision for all acquired science data to NASA. For this intended AO, Mars Scout Mission of Opportunity investigations are capped at \$25M (FY 2003), will be conducted on a no-exchange-of funds basis with the agency sponsoring the parent mission, and require a commitment from the sponsoring organization by Dec. 31, 2003.

This expanded version of the FBO notice will be available until the date of release of the AO.

Note that the Mars Scout AO may contain provisions that differ from this notice, in which case those in the AO will take precedence. Questions or comments about this intention to release a Mars Scout AO may be addressed to the NASA Lead Scientist for Mars Exploration: Dr. Jim Garvin, Ref.: Mars Scout – 2002, Solar System Exploration Division, Code SE, Office of Space Science, National Aeronautics and Space Administration, Washington, DC 20546-0001; Facsimile: (202) 358-3098; E-mail: [jgarvin@hq.nasa.gov](mailto:jgarvin@hq.nasa.gov); Telephone: (202) 358-1798.

Important characteristics of this intended AO are expected to be:

- It is anticipated that up to four investigations will be selected through this AO, each funded up to \$500K (FY 2002) for a six-month Phase A studies (Mission of Opportunity investigations may be funded up to \$250K for Phase A study).
- Proposals submitted in response to this intended AO will be evaluated by peer review principally on the basis of scientific and technical merit.
- The inclusion of new technologies to achieve performance enhancements (i.e., related to enabling improved, high-impact scientific measurements) and to reduce total mission cost is encouraged in Mars Scout proposals.
- Radioisotope Thermoelectric Generators (RTG's) are not permitted on Mars Scout missions proposed to this intended AO. Other, smaller radioactive sources such as radioactive heating units or instrument calibration sources are permitted subject to NEPA and launch approval regulations.
- As a matter of policy, the MEP requires that missions with more than one Mars year expected life in Mars orbit must carry a UHF communications package to enable telecommunications/navigation support for future Mars missions.
- MEP policy requires that Scout missions plan for and provide data through critical events to enable the reconstruction of failures resulting in the loss of mission (e.g. orbit insertion, entry, descent and landing) to facilitate investigation.
- The Lander platform originally planned for use in the 2001 Mars Lander mission is in bonded storage as the property of NASA. Proposers who may want to consider usage must be aware that NASA is offering this inventory item on equal terms to the broad community "as is." Use of a subset of the Lander elements is not allowed. Proposers must use the entire Lander platform should they choose to propose using the Lander.
- Contributions of any kind, whether cash or non-cash (property and services) to Mars Scout Mission investigations by organizations other than the NASA OSS are welcome, but the sum of contributions to a given mission may not exceed one third of the total proposed cost to the OSS.
- Launch services for these investigations must either use NASA-provided Expendable Launch Vehicles (ELV's) or be contributed ELV's which meet the high reliability constraints of NASA's Launch Services Risk Mitigation Policy.
- Investigation teams are welcome to use currently available NASA navigation, tracking, control, communications, and other services but the cost of their use will be charged against that of the investigation. Non-NASA capabilities may also be used if they are technically appropriate and cost effective.
- All data from Scout investigations will be non-proprietary and must be made available to the science community and public as soon as possible.
- All proposals will be required to include in their overall planning, commitment to

NASA's Education and Public Outreach, small disadvantaged business, and Technology Infusion/Transfer Programs (details of these plans will be required in Step 2 if selected).

The following schedule describes the anticipated major milestones of this intended Mars Scout AO:

AO release	approximately April 2002
Preproposal Conference	Release + 2 wks
Notice of Intent to Propose due	Release + 4 wks.
Proposals due by 4:30 p.m. EDT	Release + 90 d
Non-U.S. Letters of Endorsement due	Due Date + 30 d, 2002
Selections announced (target)	Due Date + 5 mo., 2002
Phase A Concept Study Reports due (target)	Selection + 6 mos.
Confirmation of investigation(s) for flight (target)	Selection + 8 mos